



Blue Hills State Reservation

Deer Management Plan

Department of
Conservation & Recreation

Division of Fisheries & Wildlife

Public Meeting Presentation

September 24, 2015

dcr
Massachusetts





DCR Commissioner Carol Sanchez
Welcome & Thank you!

Thank you to our Partners!



Department of Fish & Game



Division of Fisheries & Wildlife

Massachusetts Environmental Police



Massachusetts State Police

Friends of the Blue Hills





DCR Commissioner Carol Sanchez

Welcome & Thank you!

- Thank you for attending today's meeting and for your interest in the Blue Hills Reservation!
- The Blue Hills Reservation is one of the crown jewels in DCR's portfolio of statewide properties.
- The Reservation is one of the first properties to be acquired by the Commonwealth for public recreation.
- It is a special place and we want to make sure future generations can enjoy and appreciate its resources.





DCR Commissioner Carol Sanchez

Welcome & Thank you!

- As stewards of the Blue Hills Reservation, DCR is concerned with the long-term health of the forest
- DCR's 2011 Resource Management Plan (RMP) for the Blue Hills notes deer overpopulation as a significant problem and recommends planning for deer management
- The 2014 Environmental Bond Bill (Ch. 286, §43, Acts of 2014)
 - Directs DCR to work with DFW to identify areas where deer overpopulation is negatively impacting forestation, water resources, plant growth
 - Directs DFW and DCR to develop and implement harvest management plans for identified areas



DCR Commissioner Carol Sanchez

Welcome & Thank you!

- Based on our RMP and the Environmental Bond Bill DCR has worked with DFW and other state and local partners to develop a deer management plan, which we are happy to share with you tonight
- Also, DCR would like to thank our partners in the Legislature for their guidance and support in the development of this management plan.



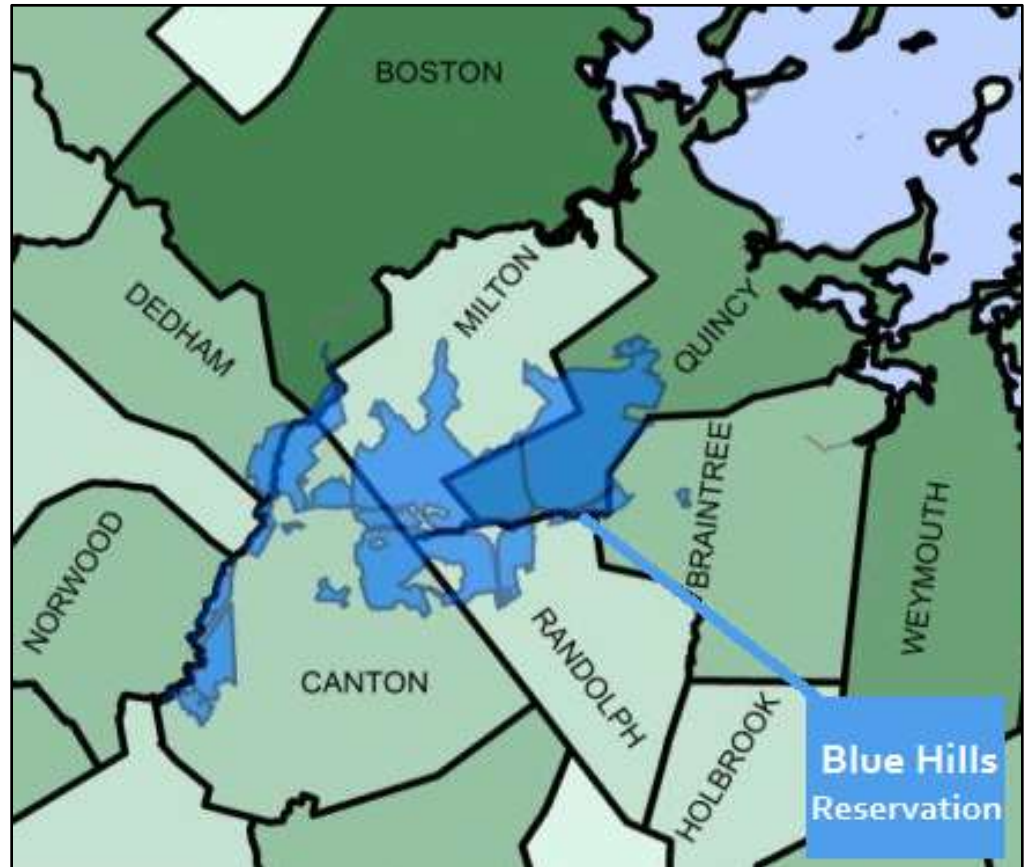
Presentation Overview

- Nature & Causes of Deer Overabundance Problem
- Key Developments and Planning Efforts
- Deer Population Survey Overview & Findings
- Deer Management Options
- Preferred/Recommended Management Option
- DCR Quabbin Controlled Hunt Experience
- Proposed Blue Hills Deer Management Plan and Program Components
- Questions & Comments



Blue Hills Reservation

- Over 7,000 acres
- Located in Milton, Canton, Quincy, Randolph, Dedham, Braintree, & Boston
- Acquired: 1893 by Metropolitan Park Commission
- Estimated 650K people and 250K households within 4-mile radius



Nature of the Problem

- White-tailed deer overabundance
- Leading to:
 - *Vegetation over-browse*
 - *Lack of forest regeneration*
 - *Tick Abundance*
 - *High rates of Lyme Disease, etc.*
 - *Property/landscaping damage*
 - *Vehicle collisions*



Nature of the Problem

- Impacts to vegetation and species diversity



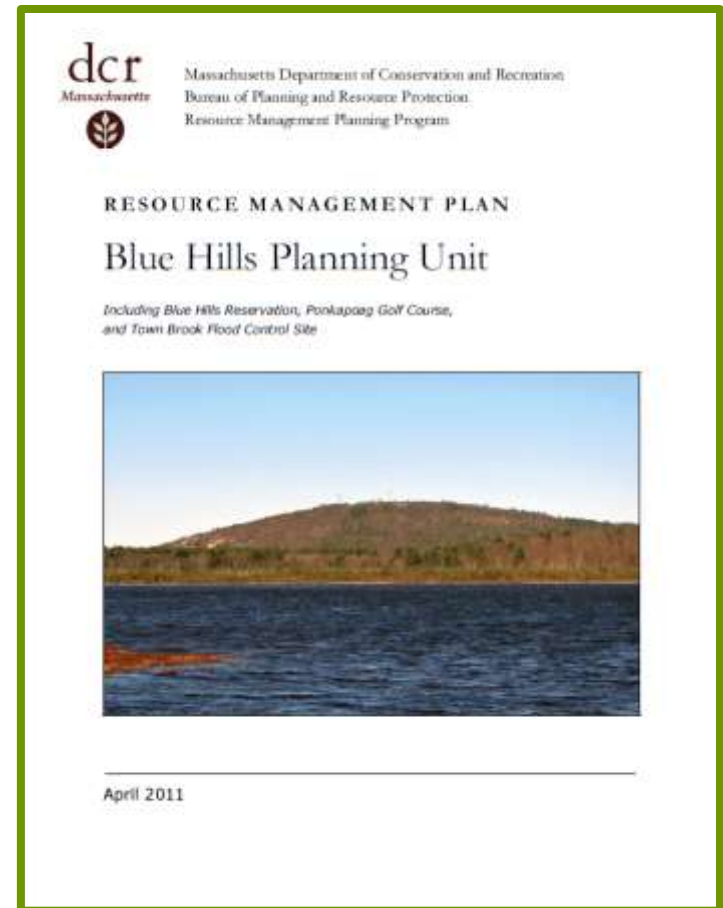
Causes of Deer Overabundance

- Excellent deer habitat
- Extirpation of major historic predators; such as mountain lions and wolves
- No hunting allowed in Blue Hills
 - *Created Sanctuary Habitat favorable to deer population increases*



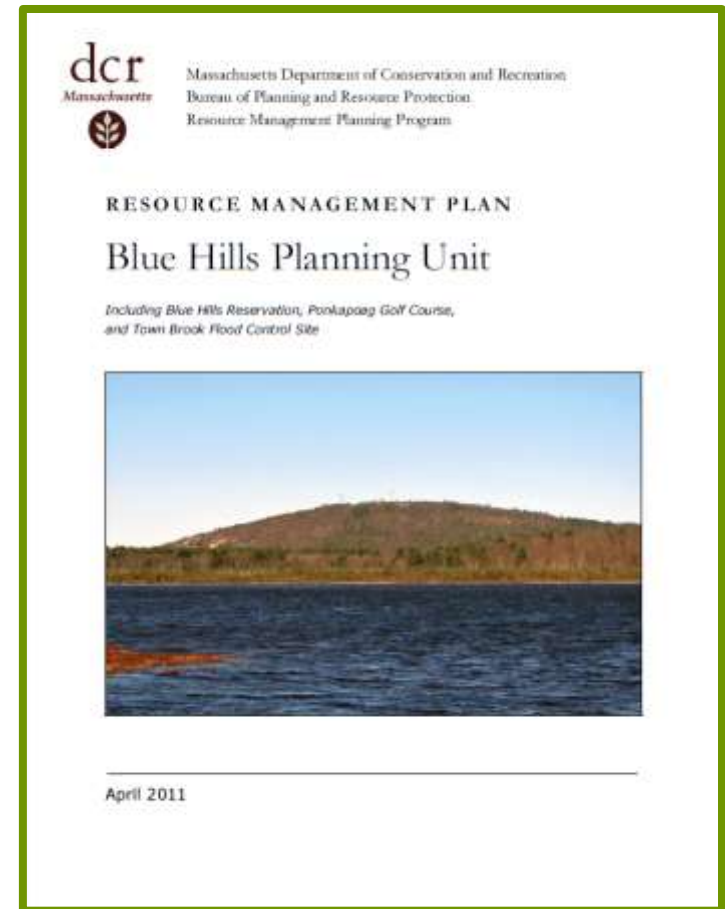
Key Developments & Planning Efforts

- **April 2011**: DCR develops and Stewardship Council approves Resource Management Plan (RMP)
 - RMP Notes: “over-browsing [by deer] has the potential to significantly decrease species diversity and suppress canopy cover for decades”
 - RMP Notes: “over-browsing by deer also affects some of the reservation’s rare plants”



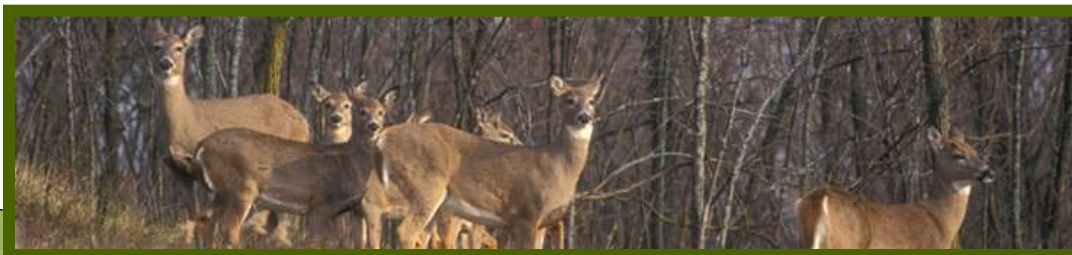
Key Developments & Planning Efforts

- **April 2011**: DCR develops and Stewardship Council approves Resource Management Plan (RMP)
 - RMP Recommends: “Work with MassWildlife to conduct study of deer populations within the Blue Hills and to ascertain the extent of their impacts on the reservation’s natural resources”
 - RMP Recommends: “If warranted, discuss deer management options”



Key Developments & Planning Efforts

- **Fall 2011**: Nearby private property owners establish voluntary Neighborhood Deer Culling Program and ask DCR to consider deer hunting in the Blue Hills
- **May 2013**: DFW and DCR conduct deer density survey
- **June 2014**: DFW and DCR present deer density survey findings and problems associated with deer overabundance at Friends of Blue Hills public meeting



Key Developments & Planning Efforts

- **Summer 2014 – Winter 2015**: Release of deer population survey findings results in considerable public attention on the need to implement deer management solution
 - Several news articles and editorials point to the problem and mention DCR-DFW deer management planning efforts:

June 21, 2014 (Patriot Ledger): *State considers plan to thin deer herd in Milton's Blue Hills*

July 27, 2014 (Boston Globe): *State considering measure to cull Blue Hills Deer Population*

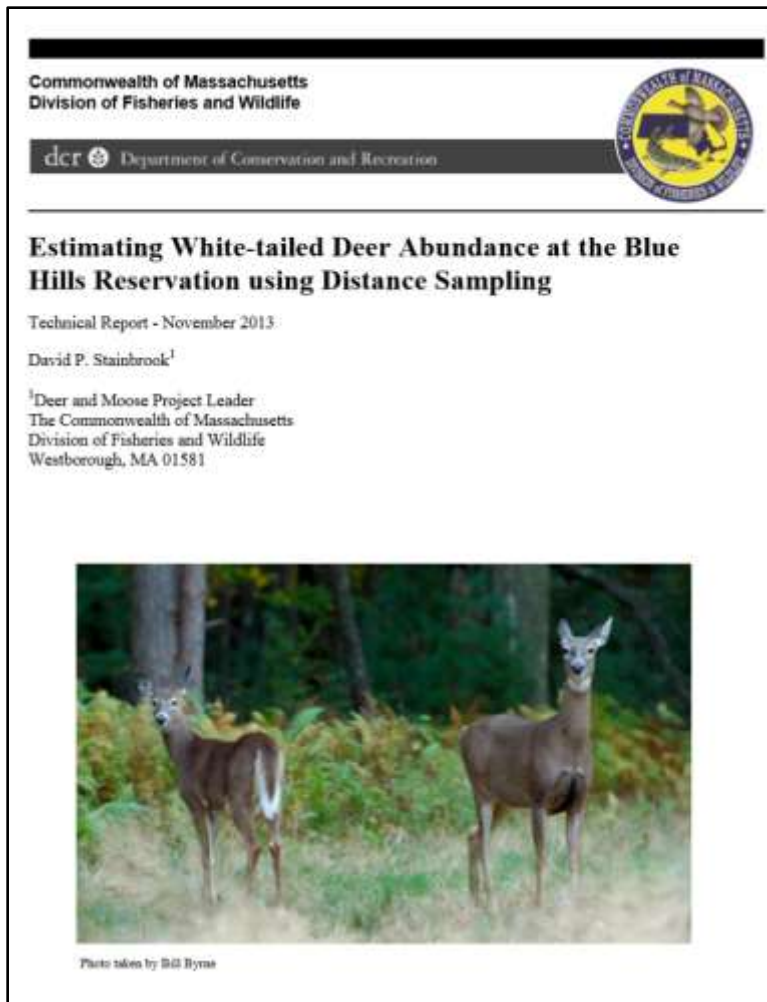
January 18, 2015 (Boston Globe): *Deer hunting in the Blue Hills?*

January 26, 2015 (Boston Globe): *Deer Prudence: allow small hunt in Blue Hills*

Key Developments & Planning Efforts

- **August 2014**: Environmental Bond Bill (Ch. 286, §43, Acts of 2014)
- **September 2014**: DFW presents deer population survey findings at DCR Stewardship Council public meeting
- **Fall 2014 – Winter 2015**: DCR and DFW begin to explore deer management options and develop a draft management plan
- **May 2015**: DCR and DFW meet with state and local law enforcement officials to discuss management options and intent to initiate a controlled hunt
- **June – August 2015**: DCR, DFW, MEP, MSP working group develops more detailed controlled hunt plan
- **September 2015**: DCR, DFW, MEP, MSP meet with local law enforcement officials, legislators, and city/town officials to review controlled hunt plan and solicit feedback

Deer Population Survey



John O'Leary

Assistant Director

Division of Fisheries & Wildlife

David Stainbrook

Deer & Moose Project Leader

Division of Fisheries & Wildlife

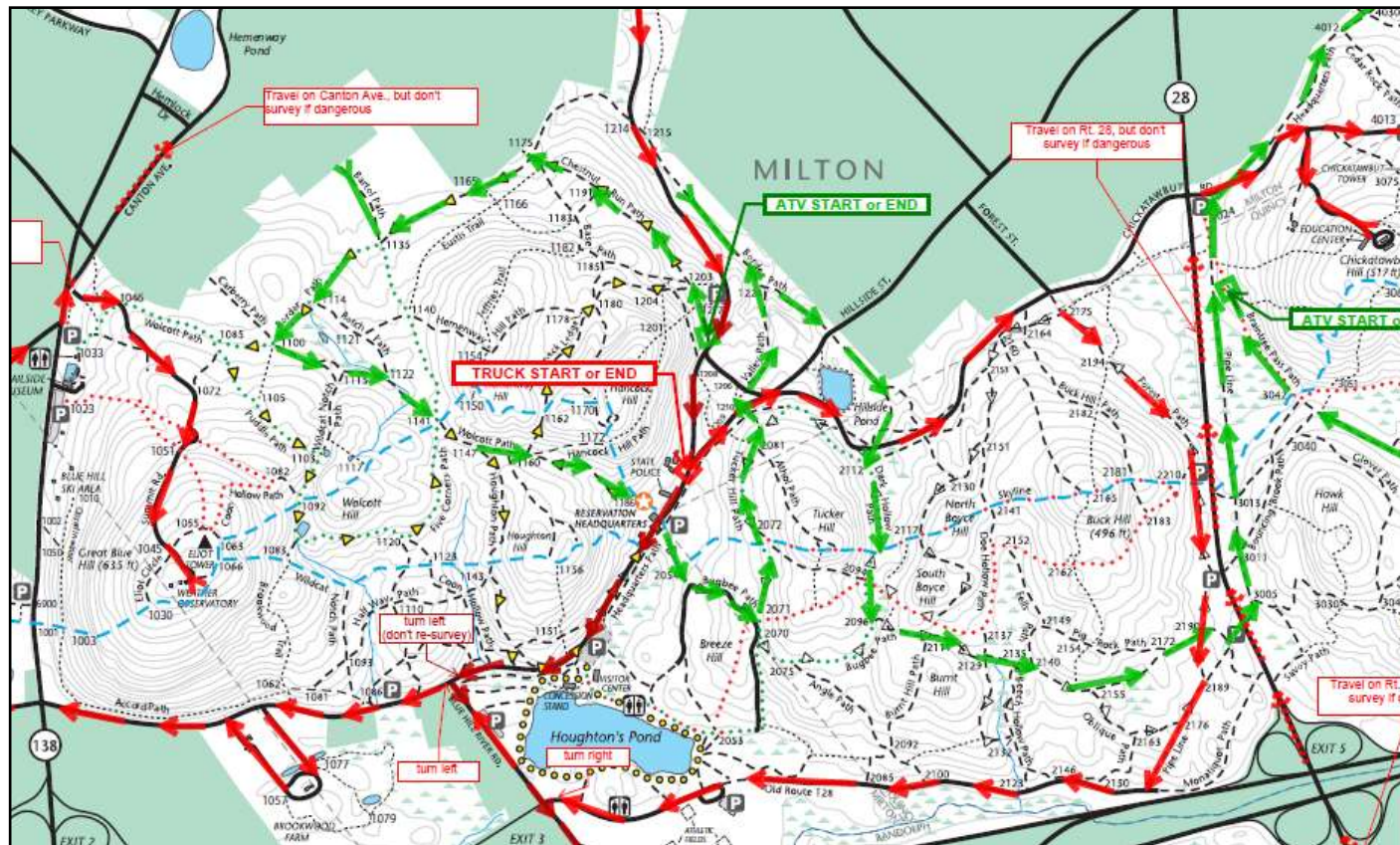
Deer Population Survey - Overview

- Goal: Estimate deer density per square mile
- Conducted in early May 2013
- Distance Sampling Method used to estimate density
- Two crews of DCR and DFW staff gathered data over the course of 3 nights for 4-6 hours per night.
- Note: First-ever survey by DFW to estimate deer density in an un-hunted area of eastern MA.



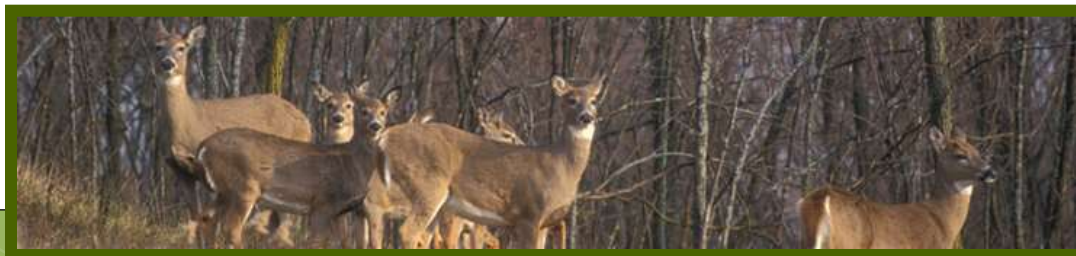
Deer Population Survey - Overview

- 14 survey routes (transects) – using paved roads and dirt trails



2013 Deer Population Survey – Findings

- Estimated more than 85 deer/mi² of forest
(conservative estimate, actual density is likely much higher)
- Approximately 600-800 deer across more than 7.5 mi² of deer habitat
- Density estimate exceeds DFW's statewide density goals ranging from 6-18 deer/mi²
- Also exceeds threshold density of 18-20 deer/mi² where negative impacts become evident in northeastern forests



Deer Management in Massachusetts

- DFW can only effectively manage deer on or near lands that are open to hunting.



Deer Management Options

Non-Lethal Methods

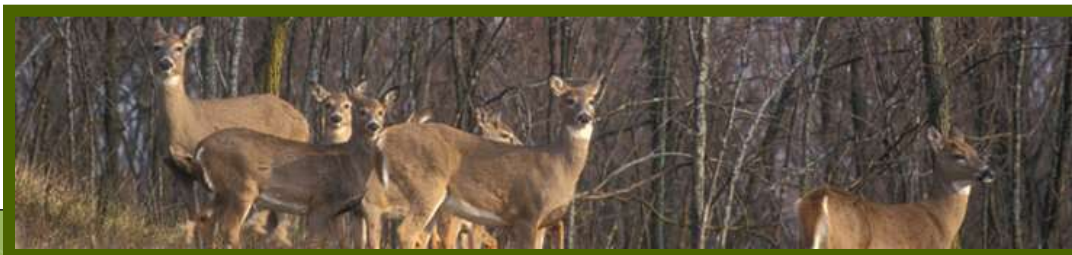
- No Action
 - *Deer population will continue to grow*
 - *Increased impacts to forest, public safety, public health and property/landscaping damage*
- Fencing & Repellents
 - *Does not really address deer abundance*
 - *Exclusion fencing is expensive*
 - *Repellents only work short-term (at best)*



Deer Management Options

Non-Lethal Methods

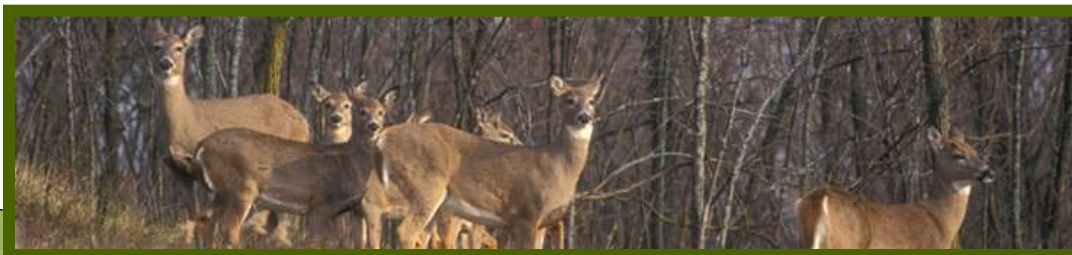
- Sterilization/Contraception *(not legal in MA)*
 - *Very expensive and requires intensive, long-term operation*
 - *Can reduce population growth, but not shown to significantly decrease deer density in reasonable timeframe*
- Trap and Transfer *(not legal in MA)*
 - *Complex and expensive operation*
 - *No realistic release sites in need of more deer*
 - *Translocation process is stressful and can lead to disease spread*



Deer Management Options

Lethal Methods

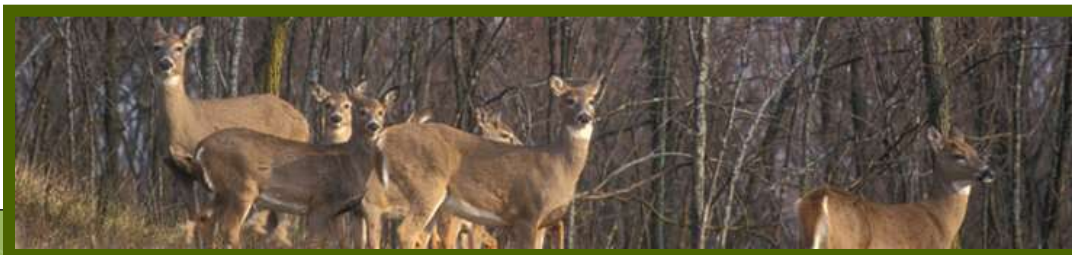
- **Hired Culling** *(permitted only at airports for public safety)*
 - *Expensive; especially at a large scale*
 - *Denies citizens access to a renewable public resource*
 - *Contradicts North American Model of Wildlife Conservation*
- **Trap and Euthanize**
 - *Complex and expensive operation*
 - *Denies citizens access to a renewable public resource*
 - *Contradicts North American Model of Wildlife Conservation*



Deer Management Options

Lethal Methods

- Regulated Hunting
 - *Effectively used statewide to manage deer at desired levels*
 - *Cost-effective*
 - *Provides citizens access to a public resource*
 - *Access to land open to hunting is necessary to ensure deer management efforts are successful*



Deer Management Options

Lethal Methods

- Regulated Hunting
- Deer Hunting Season in MA
 - Begins mid-October and ends December 31st
 - Archery Season: begins mid-October
 - Shotgun Season: begins Monday after Thanksgiving and lasts only 2 weeks
 - Primitive Firearms (“muzzleloaders”): begins around mid-December through December 31st



Preferred / Recommended Option

Regulated Hunting

- In the form of a **Controlled Hunt**
 - Additional restrictions applied beyond current state regulations, such as:
 - *Limitation on the number of hunters allowed to prevent overcrowding*
 - *Establishing an application/access permit process*
 - *Restrict type(s) of hunting implements allowed*
 - *Limit season length*
 - Important to balance the need for restrictions with the need to ensure adequate access for success



Preferred / Recommended Option

Regulated Hunting

- Controlled Hunt would not be unprecedented for DCR



Quabbin Reservoir Annual Controlled Hunt

The Quabbin Experience:

White Tailed Deer Population Reduction and the Ecological Response



Dan Clark

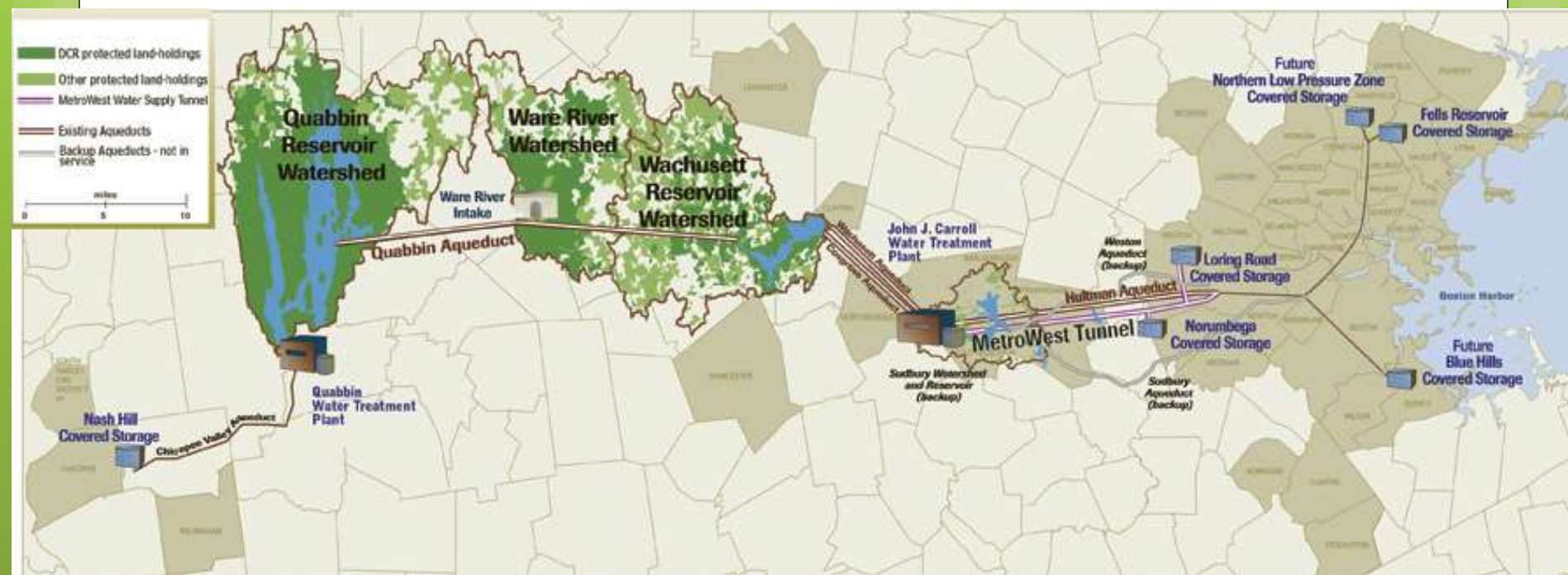
Natural Resources Section

Division of Water Supply Protection

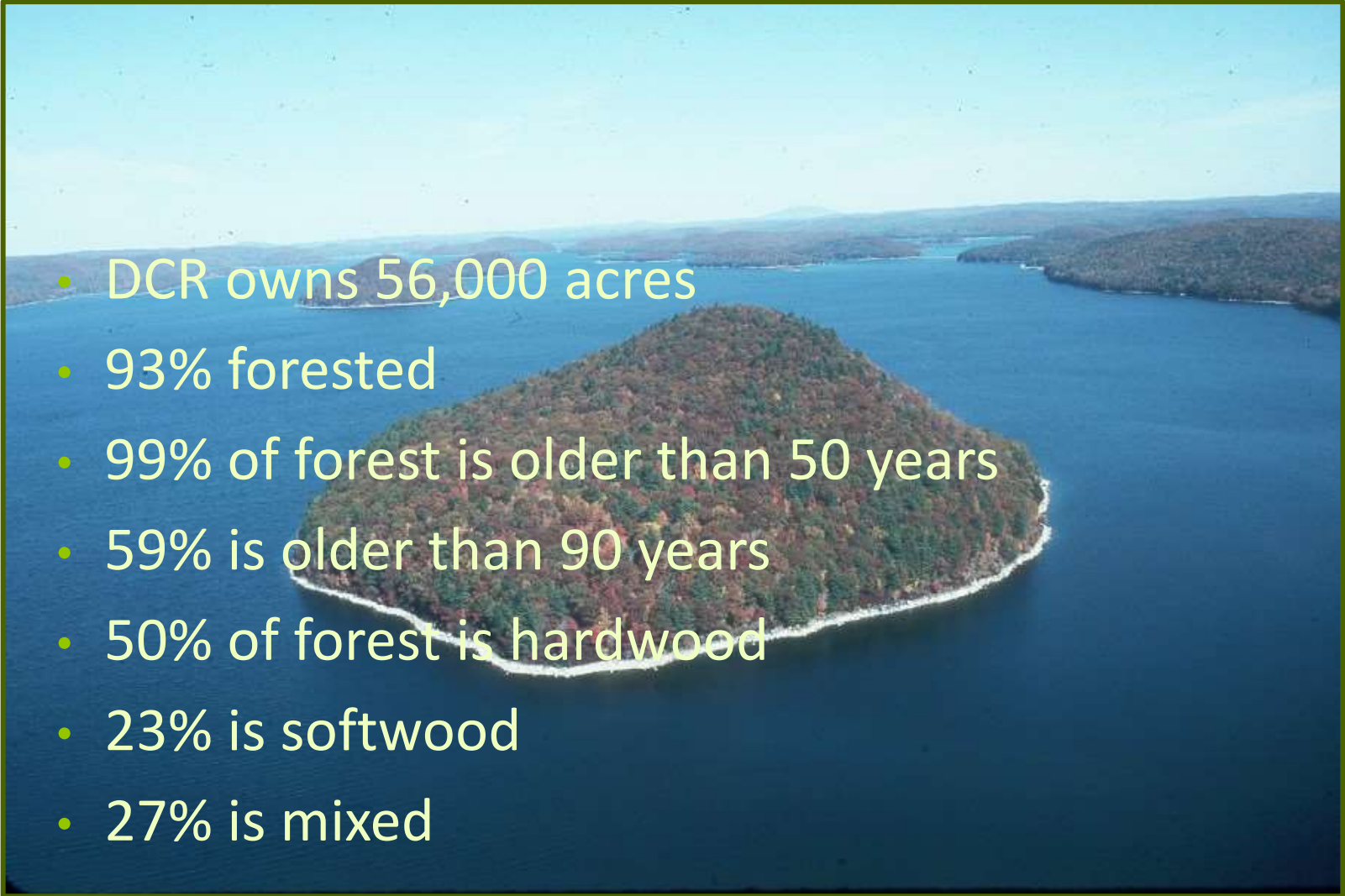
DCR

Quabbin Reservation

- Created in the 1930's
- Water flows from Quabbin into Wachusett reservoir then on to Boston
- Quabbin holds 412 billion gallons
- Treated, but unfiltered water



Quabbin Reservation

- 
- An aerial photograph of a large, forested island in the middle of a deep blue lake. The island is covered in dense trees with some autumn-colored foliage. In the background, more forested land and distant hills are visible under a clear sky.
- DCR owns 56,000 acres
 - 93% forested
 - 99% of forest is older than 50 years
 - 59% is older than 90 years
 - 50% of forest is hardwood
 - 23% is softwood
 - 27% is mixed

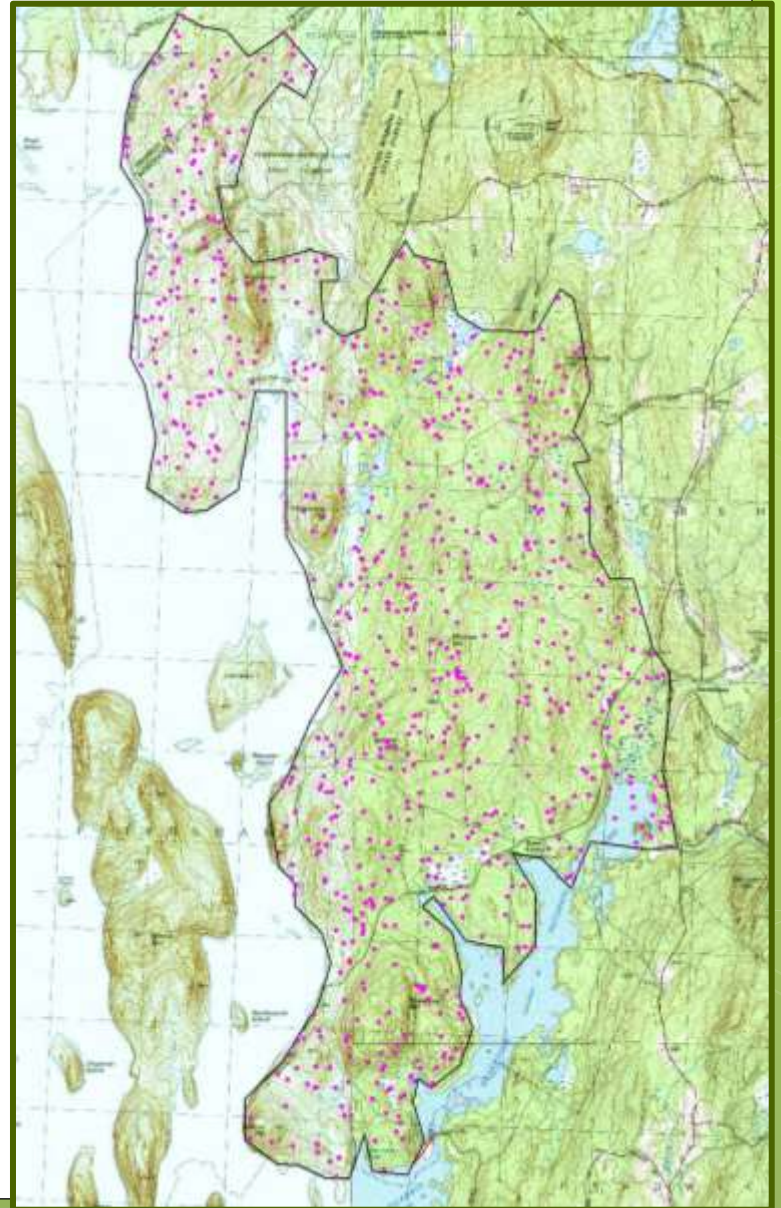
Deer at Quabbin

- Closed to hunting from 1930's until early 1990's
- Signs of over browsing first seen in 1946
- Deer densities estimated from 1983-1992
- Deer densities ranged from 45-60 deer/mi²



Petersham: 60 deer/mi²

804 deer



Forest Conditions with Lots of Deer



Forest Conditions with Lots of Deer

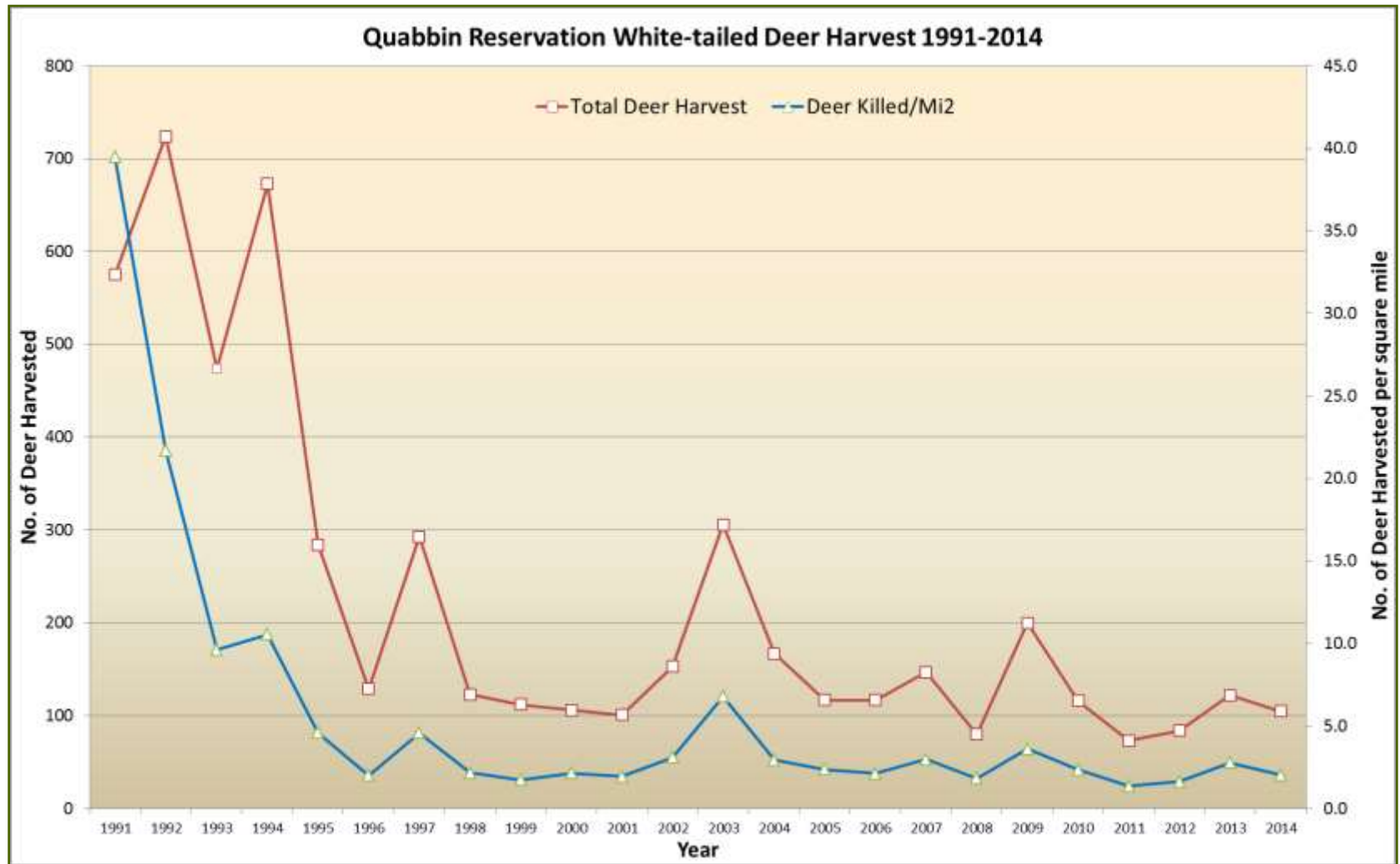


Forest Conditions with Lots of Deer

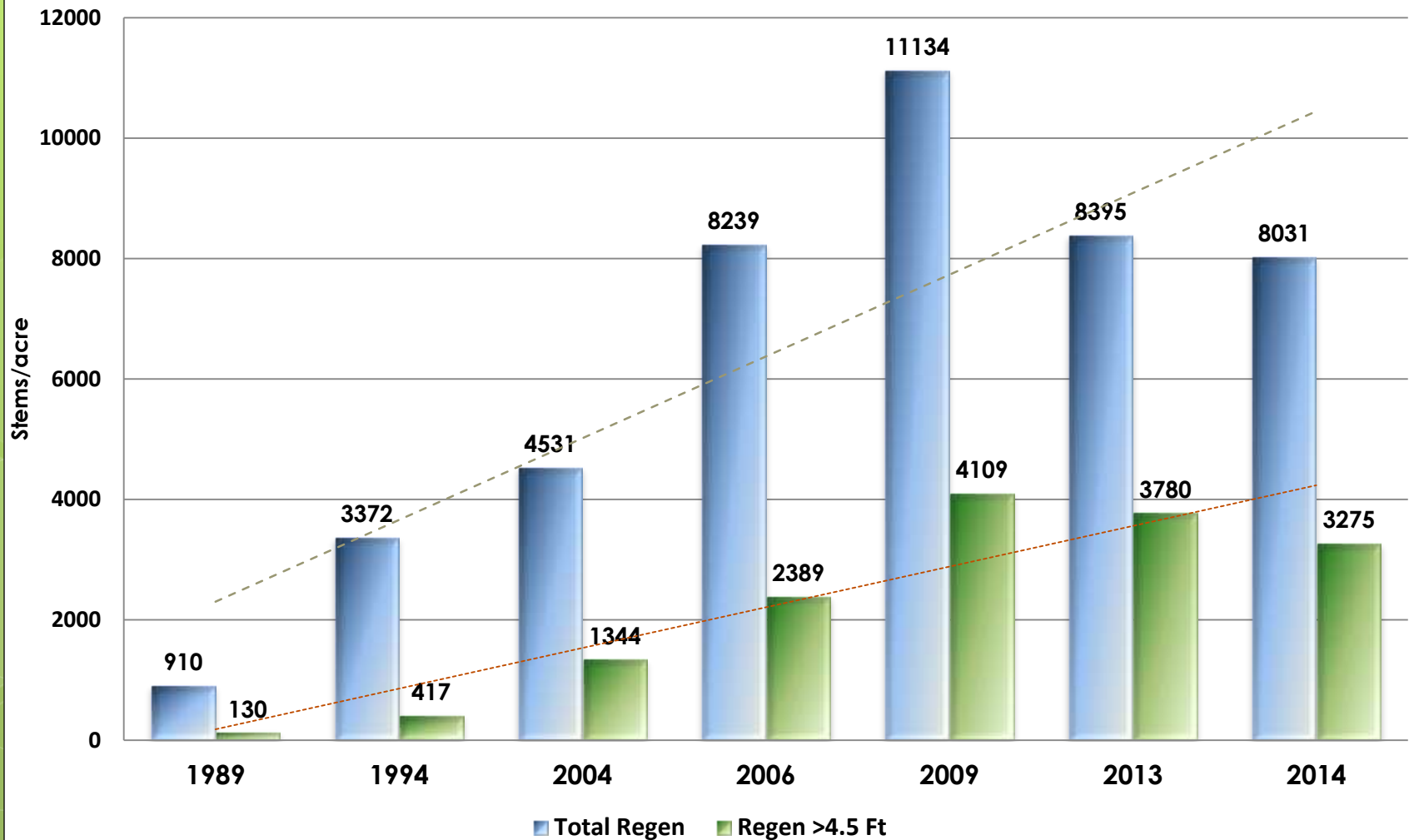


Forest Conditions with Lots of Deer





Mean Stem/Acre at Quabbin from 1989 - 2014



Current Forest Conditions



Current Forest Conditions



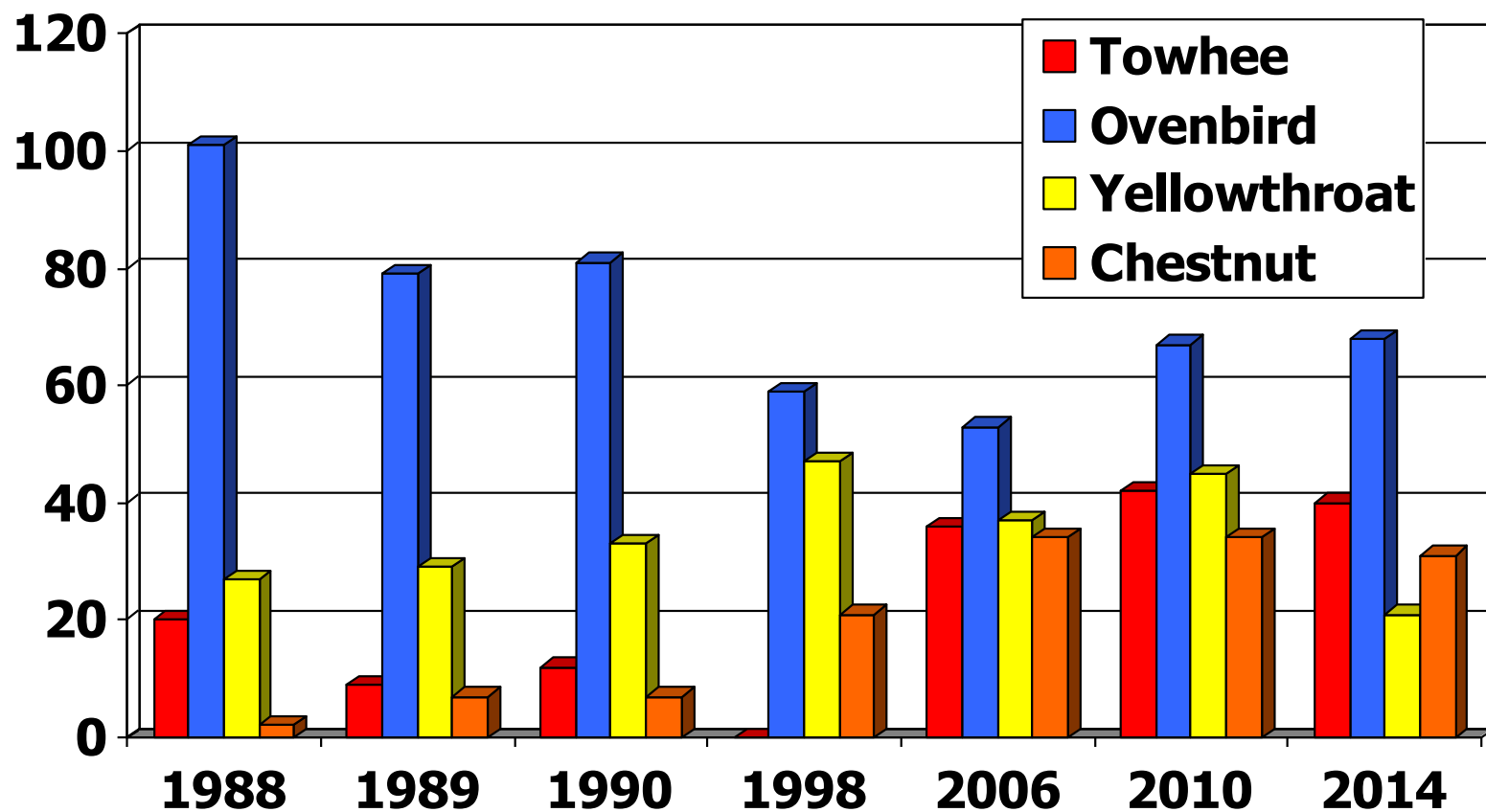
Current Forest Conditions



Current Forest Conditions



Roadside Breeding Bird Data



Return of Herbaceous Plants

- **Brambles:**
blackberry and
raspberry
- **Sumac**
- **Flowers:** lady
slipper
 - Trout lily
 - Trillium
 - Cardinal flower
- **Poison ivy**



Ecological Diversity

- Grape vines
- Milkweeds
- Joe pye weed
- Asters
- Marsh marigold
- Alder
- Ruffed grouse & rabbits



Conclusions

- Deer densities at Quabbin substantially reduced and maintained at much lower levels
- Excellent response from the forest
 - *Able to regenerate trees*
 - *Diversity is still lacking but moving in right direction*
- Increased ecosystem diversity
 - *Herbaceous plants*
 - *Wildflowers*
 - *Bird communities*
 - *Small mammals*
- Recovery is relatively slow and ongoing

Proposed Blue Hills Controlled Hunt

Blue Hills State Reservation *Deer Management Plan*



Draft Deer Management Plan

- Posted to DCR website on September 15th
- Accepting written comments through October 2nd

Proposed Blue Hills Controlled Hunt

Key Decision-Making Considerations & Priorities

- Public Safety
- Resources
- Effectiveness in reducing deer herd
- Timing
 - *Duration of time in which hunting would be allowed*

*With public safety as a key priority, DCR will take a **Phased Implementation** approach*



Proposed Blue Hills Controlled Hunt

Program Components – Year 1

- **Participation & Access Permitting**
 - *Follow system similar to Quabbin hunt*
 - *Hunters will need to apply to participate*
 - *Hunters must have valid FID card and hunting license*
 - *Participants will be chosen from the applicant pool using random lottery system*



Proposed Blue Hills Controlled Hunt

Program Components – Year 1

- **Timing & Length**
 - *During annual shotgun season (two weeks starting the Monday after Thanksgiving)*
 - *4 total days of hunting – broken into two 2-day segments*
 - *Monday & Tuesday of each week*
- **Hunting Implements**
 - *Shotgun with slug only (no buckshot)*
 - *NOTE: Archery in designated areas proposed in future years*



Proposed Blue Hills Controlled Hunt

Program Components – Year 1

- **Participation**
 - *240 total permits*
 - *120 permits for Segment 1 Hunters*
 - *120 permits for Segment 2 Hunters*
 - *No more than 120 hunters in Reservation at any time*

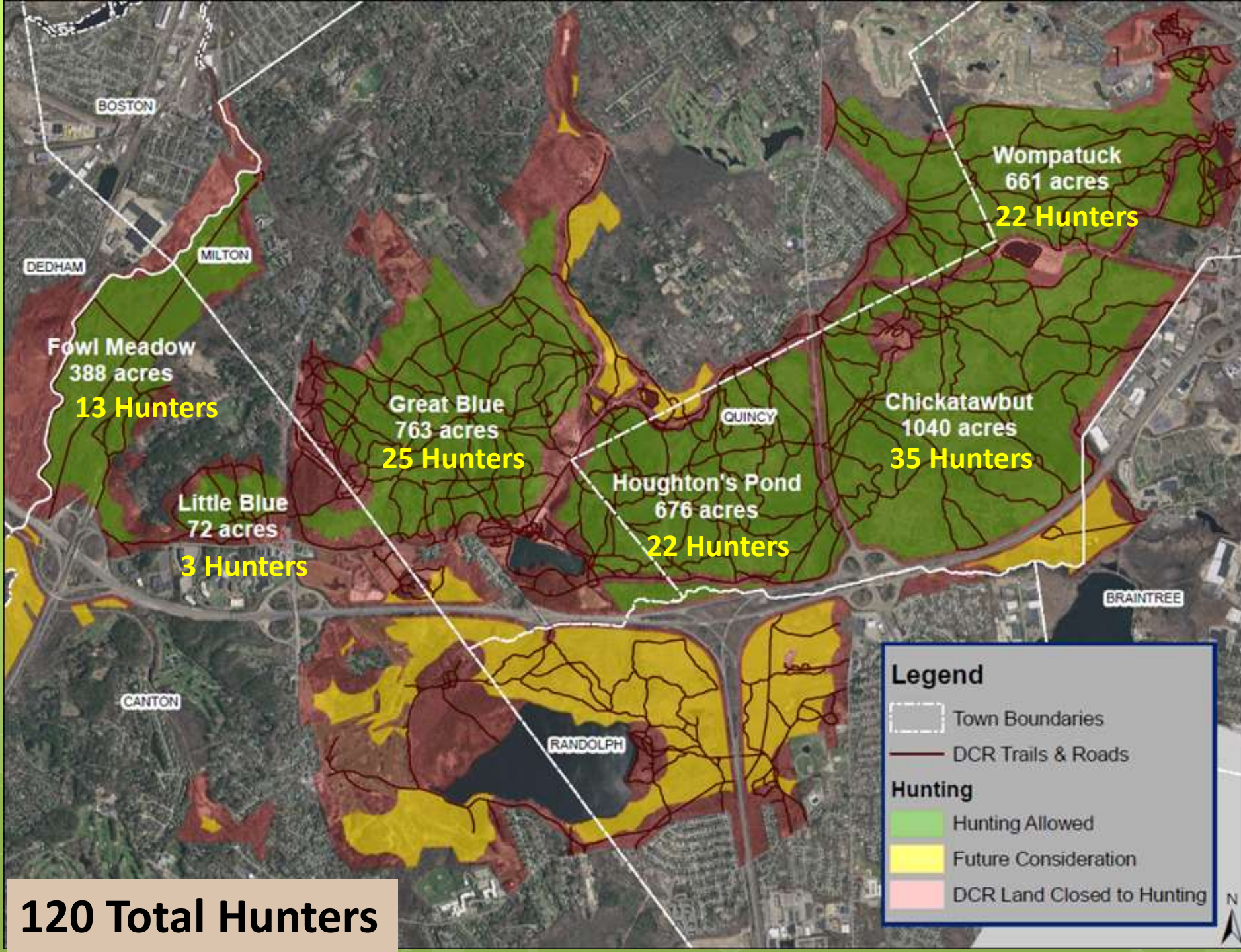


Proposed Blue Hills Controlled Hunt

Program Components – Year 1

- **Hunter Distribution & Management Zones**
 - *To avoid over-crowding in one area of the Reservation, management zones will be established*
 - *Hunter distribution to be based on 1 hunter/30 acres*
 - *Permittees will be assigned to a management zone*
 - *Permittees must stay within their management zone while hunting*





Proposed Blue Hills Controlled Hunt

Program Components

- **Hunter Orientation**
 - *Similar to Quabbin hunt*
 - *All permittees will be required to attend in order to participate in the hunt*
- **Antlerless Permits**
 - *Participants will be required to purchase at least 2 antlerless permits*



Proposed Blue Hills Controlled Hunt

Program Components

- **Check-in / Check-out Procedures**
 - *Central Location – Houghton's Pond Parking Lot*
 - *Check-in between 5:00 – 7:00 AM*
 - *Check-out by 4:00 PM*
 - *Check-out will be required. Hunters will have to turn in permit stubs when checking out.*



Proposed Blue Hills Controlled Hunt

Overarching Program Components

- **Deer Cleaning & Check Station**
 - *Hunters required to move harvested deer 100 feet away from a trail for gutting/cleaning deer*
 - *Hunters responsible for transporting harvested deer to their vehicle*
 - *Central Deer Check Station at Houghton's Pond lot*
 - *All harvested deer must be checked*



Proposed Blue Hills Controlled Hunt

Program Components

- **Roadway Restrictions & Vehicular Access**
 - *Closure of Chickatawbut Road and Wompatuck Road. DCR will re-open Chickatawbut Road each day by 5:00 PM*
 - *After checking in, permittees will be allowed access to Chickatawbut Road and Wompatuck Road for parking*
 - *No Parking along I-93*
 - *Potential need for traffic calming on I-93 and Rt. 28*
 - *Vehicular access prohibited on trails*
 - *DCR will post VM Boards in advance and during road closures*

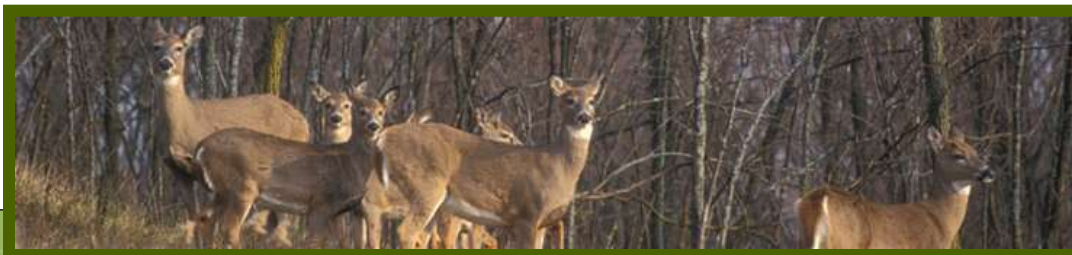


Proposed Blue Hills Controlled Hunt

Program Components

- **Available Parking Areas**

- *Houghton's Pond parking lot*
- *Site 5/Ballfields parking lots*
- *Pull-off parking areas along Route 28*
- *Park & Ride lot on Route 138*
- *Paul's Bridge parking area (Fowl Meadow)*
- *End of Royal Street (abutting Fowl Meadow)*
- *North parking lot at Trailside Museum*
- *Hancock Hill off of Unquity Road*
- *Hillside Street lot across from MSP barracks*
- *Corner or Chickatawbut Road and Route 28*



Proposed Blue Hills Controlled Hunt

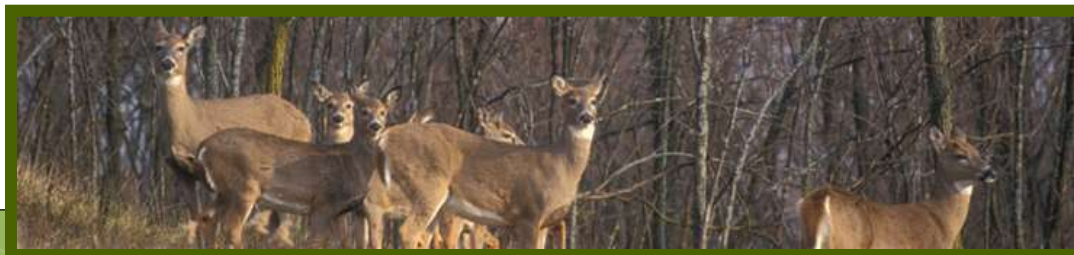
Program Components

- **Violations**

- *Violation of program rules to result in immediate removal from the property and suspension of access to the program in future years*
- *Any person found hunting without a valid permit will be immediately removed and prohibited from applying to participate in the hunt in future years*

- **Public Access Restrictions**

- *DCR will restrict public access on days when and in areas where hunting is taking place*



Proposed Blue Hills Controlled Hunt

Program Components

- **Public Information, Outreach, & Signage**
 - *DCR will work with state and local partners and Friends of Blue Hills to inform neighbors/public of hunt logistics*
 - *Press releases, websites, social media*
 - *VM Boards at park entrances and key intersections*
 - *Public information session*
 - *Signage at trailheads*
 - *Notices will include contact information to report issues / ask questions*



Proposed Blue Hills Controlled Hunt

Program Components

- **Unified Safety & Operations Command Structure**



Proposed Blue Hills Controlled Hunt

Proposed Phased Implementation Plan

- **Incremental Year-to-Year Enhancements might affect one or more program components, such as:**
 - *Number of hunting days*
 - *Allowable hunting areas*
 - *Allowable hunting implements*
 - *Hunter participation and distribution*
- **Decisions Regarding Year-to-Year Enhancements to be Based on:**
 - *Prior year experience*
 - *Resources*
 - *Prior year assessments*



Additional Information

For more information:

<http://www.mass.gov/eea/agencies/dcr/public-outreach/public-meetings/>

If you have comments:

Submit Online: <http://www.mass.gov/eea/agencies/dcr/public-outreach/submit-public-comments/>

Write: Department of Conservation and Recreation
Office of Public Outreach
251 Causeway Street, Suite 600
Boston, MA 02114

Deadline: Friday, October 2, 2015

Note: Public comments submitted to DCR may be posted on the DCR website in their entirety.

If you have other questions or concerns, or wish to subscribe to a DCR general information or project-specific listserv: contact DCR's Office of Community Relations at 617-626-4973 or Mass.Parks@state.ma.us.



Blue Hills State Reservation

Deer Management Plan

Department of
Conservation & Recreation

Division of Fisheries & Wildlife

Public Meeting Presentation

September 24, 2015

Questions & Comments
